



FIRST CLASS CITY
FIRST CLASS SERVICE

ROCHESTER

— *Minnesota* —

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Office Hours: Monday – Friday 8 am – 5 pm

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Solar - Photovoltaic (PV) Systems

Based on the 2014 National Electrical Code, Rochester Public Utilities Regulations and IBC Chapter 3113



Solar – Photovoltaic (PV) Systems

Permit Requirements:

Electrical permits are required for the installation of PV systems, whether they are attached to the structure or free standing. A building permit may be required, dependent upon a flush-mounted, non-flush-mounted or free standing system.

Zoning and Land Use Requirements:

Free standing systems may be required to meet the land use and setback requirements of the Rochester Land Development Manual and Zoning Ordinances. Zoning questions should be directed to the Rochester-Olmsted Planning Department at 507-328-7100.

Submittals for permits:

The following information is necessary for the Building Safety Department to do a proper plan review:

- 3 sets of Electrical drawings (one set will be forwarded to RPU for review) showing the following:
 - 3-line diagram that shows all equipment used in the installation and which indicates the grounding system, modules, combiner boxes, disconnects inverters, wire sizes, overcurrent device ratings, other applicable equipment used in the PV system and the calculations used to verify compliance with code minimum requirements.
 - Riser diagram that includes the structures distribution equipment bus and overcurrent ratings, any added distribution equipment, utility required meter and disconnect, wire sizes, inverter(s) output circuit breaker ratings.
 - Specification sheets for inverters, rapid shutdown, combiner boxes, modules, racking system, grounding products, and other bulk of system (BOS) equipment.
 - Electrical plans are required to be signed by a Minnesota State licensed Professional Engineer, Electrical Contractor, or other approved permit applicant (such as the home owner).
- Site plan showing the system location, including the utility required metering and disconnect locations as per Minnesota Statutes (M.S.) 78 35.5400.
- A structural analysis that shows that the PV system, along with the supporting structure, is capable of withstanding the required design wind and snow loads.
- Structural drawings for any modifications and/or alterations that are required to accommodate the required loads. These drawings should clearly indicate the required framing and anchorage of the PV system.
- Depending on the scope of the project, other City departments may become involved in the process such as Rochester's Planning & Zoning and Rochester Fire Department.
- The electrical permit applicant must contact Rochester Public Utilities (RPU) for connection agreements.

Required Inspections:

The permit holder(s) will be responsible for scheduling inspections with Building Safety.

Electrical inspections:

- 1) Rough-in inspection. This inspection typically occurs after the PV racking system has been installed and bonded, but prior to the solar modules being attached to the racking system. This allows the inspector to verify nameplate information on the module matches the submitted plan review documents.
- 2) Underground inspection. This inspection is required if there is underground electrical. This inspection occurs prior to the backfilling of the trench.
- 3) Concrete encased electrode inspection. This inspection is required if there are piers or footings required for the support of the PV system. This inspection occurs after installation of reinforcing steel and prior to placement of the concrete.
- 4) Final inspection. This inspection occurs after all work has been completed.

Building inspections

- 1) Footing and Foundation Inspection. This inspection is required if there are piers or footings required for the support of the PV system. This inspection occurs prior to the placement of the concrete.
- 2) Framing Inspection. This inspection is required if there are structural modifications required to support the PV system. This inspection occurs after the structural modifications have been completed and prior to concealing any work.
- 3) Final Inspection. This inspection occurs after all work has been completed.

Every effort is made to perform all inspections the next business day following the request. Inspection requests must be received prior to 4:30 pm if the request is for next day service. Call 507-328-2600 to schedule an inspection and please have your permit number available when you call. Inspector's work schedules fill up fast at certain times of the year, so if you can call more than a day in advance you may avoid any potential delays in the progress of your project.

A certificate of completion may be obtained from Building Safety after all inspections have been approved.